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(54) **Plasma display apparatus and driving method thereof**

(57) The present invention relates to a plasma display apparatus. The plasma display apparatus according to the present invention comprises a plasma display panel comprising a scan electrode, a set-up driver that applies a rising pulse to the scan electrode during a reset period, a set-down driver that applies a first ramp-down pulse before the rising pulse is applied to the scan electrode and applies a second ramp-down pulse after the rising pulse is applied to the scan electrode, and a scan pulse driver that applies a scan pulse having an amount, which is substantially the same as that of the rising pulse, to the scan electrode during an address period subsequent to the reset period.

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EUROPEAN SEARCH REPORT

Application Number
EP 06 00 3144

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2003/156082 A1 (SEO JEONG-HYUN [KR] ET AL) 21 August 2003 (2003-08-21) * paragraphs [0012] - [0024], [0049] - [0068]; figures 6-10 *	1-17	INV. G09G3/288
X	US 2004/130508 A1 (MIZOBATA EISHI [JP]) 8 July 2004 (2004-07-08) * paragraphs [0008] - [0022], [0188] - [0192]; figure 19 *	1-17	
X	US 2004/012547 A1 (LEE JOO-YUL [KR]) 22 January 2004 (2004-01-22) * paragraphs [0065] - [0082]; figures 7,8,9a-9e *	1-17	
A	JP 2001 013910 A (FUJITSU LTD) 19 January 2001 (2001-01-19) * figure 3 *	1-17	

TECHNICAL FIELDS SEARCHED (IPC)

G09G

~~The present search report has been drawn up for all claims~~

Place of search	Date of completion of the search	Examiner
The Hague	12 June 2009	Vázquez del Real, S

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

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Application Number
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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-17

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 06 00 3144

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-17

refer to a scan driver of a plasma display applying a pre-reset waveform, a reset waveform, an addressing waveform and a sustain waveform wherein the voltages values applied in several points of the drawing waveforms are the same.

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2. claim: 18

refer to the a scan driver of a plasma display comprising an energy recovery circuit and several switches wherein only one block transistor is found in the current path.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 06 00 3144

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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12-06-2009

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		US 2005156827 A1	21-07-2005
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US 2004012547 A1	22-01-2004	KR 20040006929 A	24-01-2004
JP 2001013910 A	19-01-2001	NONE	

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82